

APPENDIX

NOTES FOR FOMC MEETING
February 7, 1989

Sam Y. Cross

The dollar has risen more or less continuously for the past two months, nearly offsetting the decline of the previous two months. The dollar's rise has come as robust growth in the U.S. economy has led to expectations of higher dollar interest rates, and as confidence has grown that the Bush administration will offer constructive and effective solutions to the nation's well known economic and financial problems.

At times during this period upward pressure on the dollar became intense. The Desk intervened on behalf of the U.S. authorities on various occasions in operations that were in general closely coordinated with foreign central banks. In all, since the December FOMC meeting the Desk has sold more than \$2 billion dollars (all of it against marks) while foreign central banks have sold more than \$3 1/2 billion in coordinated operations. At present levels, the dollar is just below its period highs, and is roughly 7 1/2 percent higher against the mark and 5 1/2 percent higher against the yen than it was at the time of your last meeting.

During December, many market observers were attributing the dollar's rise to year-end technical factors. Market dynamics

seemed to propel the dollar higher, as both dealers and corporations reduce the short dollar positions built up during the dollar's steep decline in November.

As the year end approached, however, it became apparent that other factors were also contributing to improved sentiment toward the dollar:

- Successive signs of strong U.S. economic growth encouraged market participants to expect that U.S. interest rates would continue to move higher.
- Market attitudes toward the Bush administration turned more positive as observers noted that key positions were being filled with experienced, pragmatic individuals.
- Conciliatory statements from the President-elect and Congressional leaders left the market with the impression that serious and good faith efforts would be undertaken by both sides to reduce the budget deficit.

When trading resumed after the holidays, the factors that had supported the dollar in late December continued to encourage dollar buying in the new year. As investors began to reassess the situation in the new year against the background of the dollar's rise in December, and its relatively good performance throughout 1988, there were widespread reports of Japanese and European interest in dollar-denominated assets. There were also reports of dehedging by investors, as the dollar

looked less likely to fall, and as the costs of hedging rose with the declining U.S. yield curve. And, as a safe haven currency, the dollar on occasion also benefited from tensions, actual and rumored, in Libya and the Middle East.

During early January the dollar's rise gained considerable momentum as further evidence appeared that U.S. economic activity was still growing strongly. During these episodes of upward pressure, coordinated central bank intervention helped to restrain the dollar's rise. But the underlying attitude toward the dollar remained bullish. The dollar moved higher even after Germany and several other European countries announced increases in official interest rates in mid-December and again in late January, and despite a modest decline in long-term interest rate differentials favoring the dollar.

The dollar's buoyancy has been particularly notable against the German mark. From another point of view, it can be said that the central banks have been undertaking a substantial mark support operation. They have bought nearly \$11 billion equivalent of marks during the inter-meeting period, not counting the Bundesbank's rechanelling of troop dollars and other receipts. The \$11 billion of mark purchases includes almost \$5 1/2 billion worth from sales of dollars by the United States authorities, the Bundesbank, and other central banks, plus \$5 1/2 billion worth of marks purchased by European and other central banks against their own currencies.

The market seems to hold a relatively pessimistic view of the prospects for DM investments. Since the last EMS realignment two years ago, European countries have shown themselves more willing to use monetary policy to avoid a buildup of pressures in the exchange market. Without the prospect of a near-term realignment, investors have moved funds into higher-yielding currencies, and also to countries in Europe that seem especially well poised to reap the benefits of 1992--for example, Spain. These factors have contributed to a relatively weak mark, and indeed German capital outflows have exceeded the current account surpluses throughout 1988.

The market's present view is that the dollar will likely trade with a firm undertone at least for the time being. But there are developments which could change the picture. Although the market shrugged off last month's very disappointing report of the latest U.S. trade figures, another set of bad trade numbers on February 17 could cause a reassessment. Also the dollar could become vulnerable to selling pressures if the optimistic expectations of the Administrations effectiveness prove unfounded, and much attention is now focused on the President's budget presentation tomorrow.

Mr. Chairman, I would like to seek approval of the operations conducted during the period. Since the day you last met, the Desk sold a total of \$1.115 billion for the Federal Reserve and an equal amount for the Treasury, all against German marks. In other operations, the Desk purchased a total of

\$37 million equivalent of Japanese yen on behalf of the U.S. Treasury to augment reserves. The central bank of Argentina repaid \$46.9 million of its swap drawing from the U.S. Treasury. I would also like to inform you that all of the Federal Reserve swap arrangements with other central banks have been renewed for one year, as authorized by the Committee last November.

NOTES FOR FOMC MEETING
FEBRUARY 7-8, 1989

PETER D. STERNLIGHT

Since the last Committee meeting, in mid-December, the Domestic Desk implemented the two-stage firming of reserve conditions agreed on at that meeting. The planned borrowing allowance was raised by \$100 million to \$500 million following the December meeting, and then to \$600 million on January 5. Day-to-day funds rates rose somewhat more than was expected in association with the higher borrowing levels, partly reflecting year-end pressures, exacerbated at times by reserve shortfalls and market anticipations of further policy firming.

In the December 28 reserve period, funds averaged 8-7/8 percent, compared to the roughly 8-1/2 percent level preceding the last meeting and the 8-5/8 - 3/4 percent that the Desk initially anticipated with \$500 million of borrowing. In the next reserve period, which included year-end, funds averaged 9.15 percent; while the rate receded to 9.08 percent in the second week of that period this was still a touch to the firm side of the expected 9 percent area after adopting the \$600 million borrowing allowance. Funds averaged a continued firm 9.09 percent in the January 25 period while the first week of the current period saw a further firming to 9.16 percent as Treasury balances at the Fed climbed above expectations. In the first couple of days of February, with reserves more abundant as Treasury balances ebbed, the rate slipped back to the anticipated 9 percent area, only to push higher again last Friday in the wake of the strong employment report for January and anticipations of imminent further policy firming. Today it's back around 9 percent.

For the period as a whole, actual borrowing levels averaged

fairly close to path levels--roughly \$50 million below the \$560 million average path level. Funds averaged a shade over 9 percent for the whole period. But the averaging conceals significant divergences on either side. The more predominant and persistent tendency was for borrowing to fall well short of path allowances, even while funds rates pressed to the high side of anticipated ranges. This tendency was partly offset by a few instances of heavier borrowing, most notably over the long New Year weekend, which lifted average borrowing in the January 11 reserve period to \$840 million.

The variability of borrowing and, for the most part, its tendency to run light, has left current estimates of the borrowing-funds rate relationship on particularly shaky ground, calling time and again for an exercise of flexibility in regarding path levels of borrowing, in order to avoid generating misleading signals in the implementation of policy. From the perspective of market participants, who appear to be about equally uncertain as ourselves about these relationships, the recent period saw a firming in planned borrowing from about \$400 million to \$500 or \$600 million; meantime expected funds rates, in their view, moved from around 8-1/2 percent in mid-December to 9 - 9-1/8 percent by early February, with a further rise now in train to perhaps 9-1/4 - 3/8 or even 9-1/4 - 1/2 percent in the wake of the recent employment surge.

The execution of operations during the period was complicated by a number of factors besides the uncertain borrowing-funds rate relationship. These included hard-to-predict Treasury balances, other reserve factor vagaries, and typical year-end uncertainties about demand for excess reserves. The Desk faced sizable reserve needs in the first two maintenance periods, covering the latter half of December and part way through January. Outright purchases in this

period were confined to a moderate \$680 million of bills and notes bought from foreign accounts while the bulk of the reserve need was met through repurchase agreements. This permitted the Desk to phase in reserves carefully, allowing the desired modest firming to show through, while also avoiding an excessive build-up in the seasonal need to drain reserves early in the new year. In fact, the seasonal need to drain did not emerge clearly until just about the end of January, having been delayed by unusually high Treasury balances after the mid-January tax date. This meant that temporary reserve injections were still employed in the latter half of January, while at the same time a start was made in lightening outright holdings through bill run-offs and sales of bills and notes to foreign accounts. By the start of February, with reserves becoming over-abundant, the Desk sold about \$3 billion of bills in the market, a record amount for such sales and the first market sale in two years. Bill redemptions in the latter part of the period totaled \$1.8 billion (including some run off in yesterday's auction to be redeemed this Thursday). Sales to foreign accounts came to about \$380 million while about \$240 million of agency issues matured without replacement. Net for the full period, outright holdings were reduced by \$4.8 billion on a commitment basis. Reserve absorption has been augmented in recent days through sizable matched sale/purchase transactions in the market, while a moderate matched sale/purchase was also undertaken on January 20 when it appeared that reserves were in over-supply.

Interest rates showed mixed changes over the recent period, as short-term Treasury issues rose in yield in response to a firmer policy while longer maturities were steady to slightly lower in yield--responding to the stronger dollar and to a sense that inflationary forces will be contained, if necessary by still greater

policy firming. In the background, a feeling--not too clearly defined--that the new Administration would be able to deal effectively with the budget deficit and other economic problems also imparted some sense of confidence to longer-term markets.

At the short end, rates on Treasury bills rose about 20 to 60 basis points, with the largest increases in the 3-month area, roughly matching the rise in the funds rate. In the latest bill auctions, 3- and 6-month issues were sold yesterday at 8.57 and 8.53 percent, respectively, up from 7.98 and 8.21 percent just before the last meeting. The coupon-equivalent yields on these bills closely surrounded 9 percent, while the comparable market yield on one-year bills exceeded that level by 15 basis points at the period's end. The Treasury paid down about \$8 billion in the bill area as the redemption of \$11 billion of cash management bills after the December tax date more than offset modest net issuance of regular bills.

Short- and intermediate-term Treasury coupon issues, up to about 5 years, also rose in yield over the period--by about 20 basis points in the 1- to 2-year area and smaller margins with increased maturity. Earlier this afternoon, the Treasury sold new 3-year notes at an average rate of about 9.18 percent. That's about the high point of the current yield curve. Beyond about 5 years, there were net yield declines over the period, very slight for intermediate terms but up to 10 or 12 basis points at 30 years, reducing the 30-year yield to about 8.85 percent. Increased confidence in the dollar was a persistent favorable factor for longer Treasury issues, and in turn the stronger dollar was partly attributable to the market's sense that monetary policy had firmed a bit more and could be counted on to move further if necessary to deal with inflation. Business news was regarded as consistent with moderate to somewhat vigorous expansion.

flirting with what the monetary authorities might regard as a maximum tolerable rate of speed. Price developments suggested that inflationary pressures, while probably lurking in the background, were not breaking out. Confidence was such that even a bad trade number, published in mid-January, was brushed off. Counting the ongoing quarterly financing, the Treasury will have raised about \$17 billion, net, in the coupon area since mid-December. These supplies are being fairly readily absorbed, especially in the long end where foreign buying continues, and domestic funds managers continue to stretch out maturities to match investment duration with long-term commitments.

Rates on private short-term instruments showed little net change over the period despite the rise in funds and bill rates, and in fact rates on one-month paper such as CDs and commercial paper were somewhat lower, probably reflecting the passage of year-end. More generally, the relative stability of these rates for 3- to 12-month maturities may have reflected an unwinding of the pressures that had pushed these rates up more than comparable Treasury rates before year-end.

On the other hand, longer-term corporates did not show the same price gains as long Treasury issues over the period. Issuance of high-grade bonds was light but risk of down-gradings continued to weigh on the market. In the high-yield sector, attention focused on the bonds and notes to finance the \$25 billion RJR-Nabisco buyout, which appear to be getting placed handily. This deal is expected to be settled in the next day or two. Incidentally, the Drexel firm appears to have performed a major role in this financing despite a continuing stream of publicity about its acquiescence to fines and guilty pleas related to past activities.

The situation of the thrift industry and potential related bond sales to support bail-outs generated discussion during the period but seemed to have had little visible market price impact, including reaction this morning to the plans outlined by the Administration late yesterday. Spreads paid by the Home Loan Banks for their regular issues remain moderate. Spreads on FICO issues have retained the narrower range that developed in the wake of recent auctions for these issues, with the new supply largely being sold in stripped form.

Two firms withdrew from the ranks of primary dealers in recent weeks.

County NatWest, a subsidiary of National Westminster Bank, had been added to our primary dealer list only last September and the firm had not yet moved up to a trading relationship with the Desk. L.F. Rothschild had been on the list for a little over two years, but we did not have a trading relationship with them either, as major structural and management changes, including their acquisition by Frankling Savings Association last year, had left us with questions we were still evaluating. Some other firms, no doubt, are going through searching reviews of their commitment to the government securities market, and the possibility of other defections cannot be ruled out-- though there are also firms seeking to enter.

Michael J. Prell
February 7, 1989

FOMC CHART SHOW -- DOMESTIC ECONOMIC OUTLOOK

The first chart summarizes the key assumptions underlying the Greenbook forecast. Starting at the top of the list, we have assumed that the Federal Reserve will be seeking, in the next two years, to restore a gradual downward trend in the rate of inflation. We've assumed, as well, that fiscal policy will be moving in a restrictive direction. We have assumed that Mother Nature is more cooperative this year and that we have normal crop yields; with more acres being planted, this would produce a substantial increase in agricultural output. And finally, we have assumed that oil market developments will cause only a small increase in domestic energy prices.

On that foundation, we have built a forecast that has the following financial features: first, interest rates rise appreciably further by early 1990 and then ease off a bit; second, the response of monetary velocity to this interest rate pattern implies that M2 may grow only around 3-1/2 percent this year and then pick up to roughly 5 percent in 1990; and third, the dollar depreciates moderately over the projection period.

Returning to the question of fiscal policy, the top panel of Chart 2 indicates the character of the budget assumptions we've made. We have assumed a \$27 billion deficit-reduction package, comprising primarily an assortment of spending cuts but also including some revenue enhancing user fees and enforcement efforts. As the middle panel indicates, this still leaves us with a projected fiscal 1990 total deficit of \$127

billion, well above the Gramm-Rudman sequester trigger of \$110 billion. But this estimate is conditioned on our own economic projections and technical assessments. What will matter for legislative purposes is the projection made by OMB next summer; it should be possible to produce a rosy enough scenario to meet the Gramm-Rudman requirement -- if there is indeed a desire to avoid sequestration.

The bottom panel shows the Board staff's index of the impetus to economic activity coming from fiscal policy. As you can see, there is a notable movement toward restraint in 1989 and 1990.

In our forecast, the combination of monetary and fiscal restraint produces a substantial slowing in output growth. The top panel of Chart 3 shows the pattern for real GNP, with and without adjustments for the effects of last year's drought. The information received since the Greenbook went to press -- most notably the January employment report -- suggests that we may have understated the likely growth of GNP in the first part of this year, but if we were to redo the forecast, its basic contours would not change greatly. Essentially we have projected a growth recession in 1990, with policy damping activity enough to push the unemployment rate above 6 percent by the end of the period. Once some slack has opened up in resource markets next year, inflation begins to abate, but as the bottom panel shows, prices still increase more in 1990 than in 1989.

Chart 4 provides a summary of your forecasts for 1989. The central tendency ranges indicated here cover the great majority of the Committee, and they also encompass the staff projection. However, there is a contrast with the view of the Reagan Administration, which was more

optimistic on both output and prices. For the Humphrey-Hawkins Report, the forecast of the Bush Administration presumably would be the more relevant comparison, and we may see some closing of these gaps when OMB puts out new figures later this week.

Let me now turn to a discussion of some of the details of the staff's forecast. Chart 5 addresses the outlook for household spending. As the top panel shows, we are projecting a rather broad and sizable deceleration in consumer spending. The weakening of outlays for autos and other durables is especially marked, but spending on nondurables and services also slows to well below the pace of recent years. The major restraint on consumer spending is the expected slackening in the growth of employment and income; as you can see at the right, real disposable income rises only about 1 percent in 1990.

This slowing in consumption expenditure does not seem likely to emerge in the next few months. A rising stock market has helped push the ratio of household net worth to income back almost to the 1987 high, as you can see in the middle left panel. And recent strong gains in income and employment also have helped to bolster consumer sentiment; the right panel shows the high levels of both the Michigan and Conference Board indexes last month. We are assuming that rising interest rates eventually will put a damper on consumer spending, however -- directly, by eroding asset values and raising credit costs, and indirectly, by reducing other types of expenditures and the associated job creation.

Among the other expenditure categories, housing is the most interest-sensitive -- although some question does exist about just how great that sensitivity is in today's world of ARMs, convertible fixed-rate

loans, etc. We are projecting an appreciable decline in housing starts, which, as indicated in the bottom panel, encompasses both the single- and multi-family segments of the market.

Although business capital outlays seem to respond less in the short run to changes in interest rates than does homebuilding, the combination of rising rates and generally slower growth in activity is projected to retard investment over the next two years. As indicated in the top panel of Chart 6, 1988 saw some major gyrations in spending, and, frankly, these make it rather difficult to read the underlying trends. We are looking for some recovery in equipment purchases in the near term and a gradual deceleration thereafter, while outlays for structures appear likely to continue declining.

The middle panels depict some advance indicators of investment. At the left, you can see that new orders for nondefense capital goods excluding aircraft weakened considerably in the closing months of 1988, after a surge in the summer. A good part of this weakness occurred in the computer industry, where some of our contacts suggest bookings have been depressed temporarily by uncertainties about new products. In any event, some rebound in total equipment outlays in the next few months seems to be indicated by the high backlogs shown in the chart, by the results of surveys of capital spending plans, and by the anecdotal evidence gathered in part by the Reserve Bank staffs.

As for structures, trends in contracts certainly aren't signaling any resurgence. And the anticipated rise in interest rates, on top of the still large amount of vacant office space in some locales, is likely to

more than offset any expansion of industrial plant construction that may now be in train.

In total, the projected slowing in real business fixed investment is somewhat less marked than an econometric model might predict on the basis of the slowing in GNP and declining cash flows; however, we think this forecast is reasonable for at least a couple of reasons: one is that businesses, especially in manufacturing, appear to have been careful to avoid a cyclical over-expansion of capacity, and the other is that there is a broadly perceived need to modernize and enhance efficiency in order to maintain competitiveness over the long haul.

Apart from the mildness of the deceleration of fixed investment, another factor in the avoidance of greater cyclicity in this forecast is the smooth adjustment of inventory investment. At this juncture, inventories in manufacturing (the black line in the bottom left panel) appear to be very lean relative to shipments, and while the pattern appears somewhat less favorable for trade outside of autos, most reports suggest that these levels are comfortable for the time being. With the projected slowing in the growth of final sales over the coming quarters, inventory investment will have to tail off from recent rates if serious overhangs are to be avoided. The slowing in inventory accumulation shown at the right is great enough to prevent anything more than a slight updrift in the aggregate inventory-sales ratio.

Turning now from the private to the public sector, Chart 7 shows that we do not expect much contribution to GNP growth this year or next from the government. As regards federal purchases of goods and services, in the top panel, weak defense spending likely will drag down the total

this year and next. At the state and local level, discussions of needed investment in public facilities raise the possibility of some strength in spending. Construction outlays rose a great deal in the earlier part of this decade, and we have built into our forecast some small further increases in 1989 and 1990. All broad categories of expenditure are likely to be constrained, however, by the deterioration in the financial position of the state and local sector, which is reflected in the budget deficit depicted in the bottom panel. We are anticipating that spending cutbacks will be fairly common, and we are anticipating some tax increases -- including general sales and other indirect taxes that tend to show up in inflation measures.

Which brings me to the wage and price outlook. Chart 8 focuses on the labor market picture. The top left panel updates a very simple econometric result I presented last year, relating changes in the unemployment rate to changes in real GNP -- the so-called Okun's Law relation. Basically, the chart tells us that when real GNP has grown faster than 2-1/2 percent per annum, the unemployment rate has tended to fall. As the red dots indicate, our projections of the jobless rate this year and next are in line with this pattern.

The outlook for labor productivity is depicted at the right. The underlying trend of productivity improvement in this decade has been around 1-1/4 percent per year, and is indicated by the red line. As you can see, we're forecasting below-trend increases in output per hour over the next two years. To some extent, this simply reflects the lag in adjustment of hiring to an emerging slowdown in economic activity; given that businesses have been very cautious about building their permanent

payrolls, this drag on productivity may well be more moderate than has been the case at times in the past. However, the deterioration in productivity performance also reflects our sense that the pool of new workers available to employers is now of lower quality than was true earlier in this upswing.

The data for the past year also suggest that companies are having to pay more in wages and benefits in order to hire and retain workers. We believe that the pressures on labor supplies will be great enough over the next year or so to produce a further gradual rise in rate of compensation increase -- the black line in the bottom panel. That rise will be enlarged in January 1990 by a jump in social security tax rates, which will add 1/4 percent to compensation inflation for the year as a whole. As I have remarked before, the acceleration in compensation that we have forecast is less than many econometric models would predict. We think this projection is reasonable, given what we can discern of labor and management attitudes, but the upside risks to wages seem to be at least as great as those on the downside.

Given our forecast of pay and productivity, the trend of unit labor costs -- the red line -- will deteriorate from what it has been, putting pressures on profit margins and prices. Chart 9 points up some other factors in the price outlook. The first of these is industrial capacity utilization. The slowing of GNP growth in the forecast, in combination with expected increases in capacity, implies that there will be a considerable easing in utilization rates on average. Pressures on capacity undoubtedly were a factor contributing to the recent acceleration of producers' prices illustrated at the right, and we are projecting a

deceleration in those prices over the next two years -- especially at the earlier stages of processing, represented by the intermediate goods index.

The middle panels cover two volatile areas that I touched upon in my comments about the basic assumptions in this forecast. As indicated at the left, we're anticipating that better crops this year will offset some of the price pressure coming from declining red meat supplies. Overall, consumer food prices are projected to rise a little less than 4 percent in 1989 and 1990.

As for energy, Ted will be speaking in a moment on the oil market. Suffice it to say that, while we are not expecting a large increase in consumer energy prices after the next few months, the projected pattern nonetheless is less favorable to the overall inflation picture than was last year's.

Which brings me to the bottom panel and the projection for consumer prices excluding food and energy. 1988 saw some acceleration in this component of the CPI -- a half percentage point on a December to December basis and a quarter-point on the Q4 to Q4 basis shown here. The deterioration in labor costs that we are expecting leads us to think that a further pickup is ahead. Underlying these Q4-Q4 totals is a distinct acceleration in prices over the next year, and then a leveling off in consumer inflation as markets soften in 1990.

One element in the price outlook that I have not discussed is the prospects for the dollar on exchange markets, and so I should turn things over to Ted now.

E.M.Truman
February 7, 1989

Chart Show Presentation -- International Developments

The top panel of the first chart on international developments presents an overview of our major external balances. Real net exports of goods and services -- the red line -- declined through 1986, but they increased significantly in 1987 and 1988, as the influence of the improvement in U.S. international price competitiveness began to be seen in rapidly rising exports and slower growth of imports. Meanwhile, the current account balance -- the black line -- continued to deteriorate through 1987, but that balance improved substantially last year.

The improvement in the current account balance from almost \$175 billion in the last half of 1987 to \$125 billion in the last half of 1988 was considerably larger than the improvement in real net exports because of the favorable movement in our terms of trade. Prices of agricultural exports rose, prices of oil imports declined, and the dollar appreciated on balance over the year against the currencies of other industrial countries.

For 1989, we are projecting a small improvement in real net exports under the influence of slower growth here than abroad and a moderate depreciation of the dollar. The effects of the recent strength of the dollar combine with the expected rise in the price of imported oil to prevent much improvement in the current account deficit this year, but a gradual improvement is expected to resume in 1990.

The bottom panel shows that our current account deficit as a percent of GNP has been reduced from about 3-3/4 percent in late 1986 to

about 2-1/2 percent last year. After essentially stabilizing at that level this year, we expect the ratio to decline to less than 2 percent by the second half of 1990.

Exchange rates have had an important influence on our external accounts in recent years. The top panel of the next chart shows that from the recent low point in December of 1987, the weighted average foreign exchange value of the dollar in terms of the currencies of the other G-10 countries -- the red line -- has increased about 7 percent. Adjusted for the more rapid increase in the U.S. consumer price index over this period, the dollar's real appreciation, shown by the black line, has been about 8-1/2 percent.

The dollar has fluctuated somewhat over the past year, and the movement of bilateral exchange rates has not been uniform, as is illustrated in the box at the right. [Since December of 1987, the dollar has appreciated significantly against the Deutschmark, has remained essentially unchanged, on balance, against the yen, while it has depreciated against the pound sterling and, more substantially, against the Canadian dollar. In terms of the currencies of non-G-10 countries, such as the South Korean won and the Taiwan dollar, the U.S. dollar continued to depreciate last year.]

In our forecast, we are projecting a resumption of the dollar's depreciation in terms of the other G-10 currencies. Specifically, our forecast incorporates a depreciation of 13 percent in nominal terms, and 10 percent in price-adjusted terms, from the fourth quarter of last year to the fourth quarter of 1990. This projection is based upon our view that further improvement in our external accounts will be necessary at some point and that such improvement will have to be assisted at least in

part by additional improvement in our international price competitiveness brought about through changes in exchange rates. However, it is certainly possible, especially over the next two years, that the dollar will not depreciate further and that our current account deficits can be sustained, at least over that period, with a net inflow of capital from abroad at unchanged exchange rates on average. I will consider the implications of such an alternative scenario in a few minutes.

The lower panel presents a perspective on recent trends in one estimate of real long-term interest rates. Through much of the 1980s, the dollar's foreign exchange value roughly tracked movements in the differential between U.S. and foreign rates. However, over the past 18 months, the level of, and movements in, U.S. rates have not differed substantially from those of foreign rates on average, while the dollar has fluctuated quite sharply.

As can be seen from the box at the right, U.S. overnight and long-term interest rates have risen about as much as German rates since their lows in February of last year. However, Japanese rates have risen somewhat less than U.S. rates. Over the forecast period, we expect interest rates abroad to move in the same direction as U.S. rates, though with a somewhat smaller amplitude.

Turning to economic developments abroad, the upper left panel of Chart 12 illustrates the recovery of industrial production in the major foreign industrial countries in 1987 and 1988. The expansion in 1988 was associated with lower oil prices and generally high levels of private investment spending. Toward the end of the year, economic activity slowed somewhat after monetary policies tightened.

One reason for the tightening of monetary policies abroad was the upward creep in year-over-year consumer price inflation shown in the upper right panel. Although most of the increase shown in the chart reflects the more rapid pace of inflation in the United Kingdom, concern about rising inflation has been emerging in other countries as well. Capacity utilization rates in manufacturing have been rising in each of the major industrial countries, and in most of these countries they are near or above the peak rates recorded in the late 1970s. As shown in the middle panel, commodity prices in foreign currencies, as well as in dollars, have been rising since early 1987.

Our forecast for economic activity in the major foreign industrial countries is based on the assumption that economic policy abroad, as outlined in the bottom panel, will be guided by increased concern about inflation and capacity pressures. This concern is expected to be manifested primarily in a further tightening of monetary policy in 1989. We expect that fiscal policy will be generally neutral; the exception is Germany where a package of increases in excise taxes and the imposition of a withholding tax on interest have gone into effect.

The top left panel of the next chart presents our outlook for real GNP in the major foreign industrial countries -- the red bars -- in comparison with our outlook for U.S. real GNP (drought adjusted) -- the black bars. Compared with 1988, we are projecting slower growth in real GNP in each of the six countries in 1989, under the influence of tighter monetary policies and rising oil prices. In most countries, investment spending slows, and, in some countries, consumption spending slows also. The slowdown is particularly noticeable for the United Kingdom and Canada, countries where inflation pressures have been of particular

concern to the authorities. The slowdown in average growth abroad in 1989 is less than that projected for the United States, and the growth gap widens in 1990, as growth abroad picks up somewhat while U.S. growth slows further.

As can be seen from the box at the upper right, the projected slowdown in domestic spending abroad is greater than that for GNP, as progress in external adjustment is expected to be less visible. Indeed, one risk to our forecast is that the external adjustment process will stall in the short run with a stronger dollar and more rapid expansion of foreign production. Under those circumstances, monetary authorities abroad may respond with tighter policies that contribute to less growth in the medium term.

The pattern of economic activity in all foreign countries as a group (developing countries as well as industrial countries), depicted in the middle panel, is projected to follow that for the major industrial countries alone, with a considerable slowing in 1989 followed by a mild recovery in 1990. However, for the non-OPEC developing countries, growth this year is projected to be slightly greater than last year, as a pickup in growth in the Western Hemisphere outweighs an expected slowdown in the Asian countries.

The lower panels present our outlook for consumer price inflation in the major foreign industrial countries. The pickup in projected inflation shown in the red line in the left panel primarily reflects the influence of high oil prices and tax changes in Germany and Japan. The moderation in 1990 is associated with a wearing off of these special factors, less pressure on overall capacity, and a marked slowing of inflation in the United Kingdom as tighter monetary policy bites in

that country. As can be seen in the box at the right, by the end of 1990 U.S. inflation is about 2 percent more than in other industrial countries, on average.

Against the background of slower growth abroad, the dollar's relative stability over the past year, and relatively high inflation in the United States, it is not surprising that the outlook for U.S. exports, shown in Chart 14, is for a somewhat less rapid pace of expansion than we have seen over the past two years. In the case of computers, the top panel, a slight moderation in the pace of shipments combines with the resumption of a more rapid pace of price decline, following the easing of chip shortages that affected prices in 1988. The result is a marked slowing in the growth of the value of these exports.

In the case of other non-agricultural exports, shown in the middle panel, the reduced rate of expansion in value is entirely due to less rapid expansion in real quantities exported. This outlook is consistent with recent reports from Reserve Banks; while export orders remain strong, they are not pouring in at the same rate that they did in late 1987 and early 1988. Indeed, my impression from some of those reports is that increases in export orders are not being as actively solicited as they were a couple of years ago.

Agricultural exports -- the bottom panel -- are expected to be an exception to the general pattern of less buoyant exports. The drought of last year had minor effects on the quantity of our exports, as stocks were drawn down. We are projecting a pickup in 1989 especially in exports of wheat and soybeans. Meanwhile, prices are projected to increase moderately. As a result, as can be seen in the box at the

right, we are projecting a substantial increase in the value of our agricultural exports this year.

Turning to non-oil imports, the next chart, the prices of these imports, shown in the upper left panel, increased over the four quarters of 1988, on average, at roughly the same pace as during 1987. Meanwhile, increases in the quantities of these imports -- the right panel -- generally were smaller than in 1987.

As is shown in the middle panel, we are projecting slightly lower rates of increase of imports of computers in 1989 and 1990 than last year. The more rapid decline in prices referred to earlier also should help to hold down the recorded increase in the value of these imports.

The quantity of other non-oil imports -- the red line in the bottom panel -- is projected to show a moderate increase this year in response to the fading influence of our improved price competitiveness and fairly steady growth during the first half of the year. Next year, however, with the resumption of the dollar's depreciation, and significantly slower growth in U.S. aggregate demand, the quantity of such imports is expected to decline.

Our outlook for the market for petroleum and products is shown in Chart 16. As usual, a considerable band of uncertainty surrounds our assumption about the U.S. import price shown as the black line in the top panel. We are assuming that under the influence of the recent OPEC production accord the price will recover rather quickly, and may already have done so, from an average of \$12.70 per barrel in the fourth quarter of last year, to \$15 per barrel by the middle of this year. But we are assuming it will not rise beyond that level. Our view is that excess

production capacity in the Persian Gulf is large and is likely to increase further in 1989 and 1990, as the rate of increase in world demand declines. Our assumption is that Gulf producers will choose to absorb rising demand in the second half of 1989 and in 1990 in increased production rather than in higher prices.

In the short run, we have seen upward pressure on spot market prices, represented by the price of West Texas Intermediate (the red line) over the past two months. This pressure has been associated with several factors illustrated in the middle panels. First, as is shown in the left panel, estimated free world consumption has been rising and estimated stocks are lower. Second, shown at the right, production in other industrial countries in late 1988 and the first quarter of 1989 has been declining as a result of accidents affecting U.K. production in the North Sea and new Norwegian production coming on-stream more slowly than had been projected earlier. Meanwhile, U.S. production continues to drift lower by about 200,000 barrels per day each year.

The bottom panel presents our outlook for U.S. imports of petroleum and products. Although the increase in the quantity of such imports is projected to be moderate this year and next, as stocks are drawn down and the economy slows, higher prices are projected to push up their value over the forecast period by about \$8 billion from the low estimated for the fourth quarter of last year. Most of the rise comes in the first half of this year.

The next chart provides an overview of U.S. current and capital account transactions. In 1988, total current account receipts increased more than total payments. As a result, our trade and current account deficits narrowed by \$35 to \$40 billion. In 1989, we expect no further

improvement; a small decline in the trade deficit is projected to be offset by rising income payments as dollar interest rates rise and our liabilities continue to expand. In 1990, with the lower dollar and reduced U.S. growth, the trade balance is projected to shrink to less than \$100 billion, while our current account narrows to around \$110 billion.

With respect to capital account transactions, net capital inflows in 1988 were substantially reduced from those in 1987. Net private capital inflows (line 1) declined; the decline was more than accounted for by reduced net inflows through banks (line 2); banks had less need to turn to the Euromarkets, and official deposits in those markets were reduced. At the same time, foreign private purchases of U.S. Treasury securities increased substantially last year, and the increase was only partly offset by lower purchases of U.S. stocks, producing a rise in total net inflows on securities transactions (line 3) from \$28 billion in 1987 to \$39 billion in 1988.

Net official inflows also declined in 1988. The United States acquired foreign assets on balance (line 7) producing a \$6 billion net capital outflow, while transactions by other G-10 countries (line 8) produced an inflow. Combined, the net inflow was \$11 billion dollars, but this was substantially larger than the \$2 billion in net intervention purchases of dollars, shown in line 10. The major reason for the discrepancy was a shift of official Japanese deposits from the Euromarket to the United States.

This year, with the current account deficit expected to be roughly unchanged, total net capital inflows must also be unchanged. However, with our projection of further downward pressure on the dollar

later this year, we would expect an increase in net official inflows that would offset a further decline in net private inflows through securities transactions.

The last international chart presents an alternative forecast for the U.S. economy and for our external accounts. In the baseline, we have extended the Greenbook forecast into 1991 with the assumption of no new action to reduce the budget deficit and a slight easing of short-term interest rates. The dollar continues to depreciate in 1991 at about the same rate as in the Greenbook forecast. On the assumption that the Federal Reserve will still be seeking a slowing of inflation, M2 is projected to grow 6 percent over 1991. The growth of real GNP in the baseline is higher in 1991 than in 1990, but it remains below our estimate of the growth of potential and the unemployment rate rises further.

For the alternative forecast, based on the staff's econometric models, we assumed that the dollar remains unchanged from its current level because of a stronger demand for dollar assets than is implicit in our Greenbook forecast. We also assumed that monetary policy adjusts to hold real GNP on its baseline path, as is shown in the first two lines of the table. To achieve this result, slightly faster growth of M2 is required in each year, as is shown in the next two lines. The Federal funds rate averages about 1/4 percent lower this year compared with the rate underlying the Greenbook forecast, 3/4 percent lower in 1990, and almost 1-1/2 percent lower in 1991. In one sense, these lower interest rates are a measure of the extra monetary restraint that is needed in our baseline forecast to bring about a shift of resources to the external sector if the dollar depreciates.

With the foreign exchange value of the dollar unchanged from its current level, and the path of real GNP unaffected, the direct pressure on the price level from the dollar's depreciation is substantially reduced. Consequently, compared with the baseline, the increase in GNP prices is slightly less in 1990 and about 1/2 percent lower in 1991.

The stronger dollar also has a favorable impact on real GNP abroad, raising the projected growth rate by about 3/4 percent in 1990 and 1991 compared with the baseline.

The final two lines on the table illustrate that with an unchanged dollar and somewhat easier U.S. monetary policy our current account deficit in the fourth quarter of this year would be about the same as in the Greenbook forecast -- \$130 billion. Because of the slowing in U.S. growth projected for 1990, the current account deficit would narrow by about \$10 billion that year even with the dollar unchanged; this improvement would be helped along by the faster growth abroad and lower U.S. interest rates. However, the net improvement is almost \$20 billion less than in the baseline forecast. By 1991, this differential increases to more than \$30 billion. In the baseline forecast, with growth of U.S. real GNP below potential and a continued moderate depreciation of the dollar, the current account deficit narrows to \$80 billion. With an unchanged dollar and the same growth of U.S. real GNP, but faster growth abroad, the current account deficit would remain above \$110 billion.

Mike will now complete our presentation with some additional alternative forecasts.

Your last chart presents the results of two more model simulations. The baseline here is the same as Ted described. The first alternative assumes that the System allows M2 to grow as rapidly as needed to prevent the rise in short-term interest rates that is anticipated in the Greenbook baseline. As you can see, that requires an appreciable cumulative addition of monetary growth: at the end of 1991, the level of M2 is almost 7 percent higher than in the baseline. At the lower interest rates, real GNP growth is considerably more rapid, but so is inflation by 1991. Moreover, there is still a lot of price increase in train for later years. The lower interest rates and more rapid growth of income have a powerful effect on the federal budget deficit as indicated in the bottom tier. The deficit is \$70 billion lower in 1991 than in the baseline case.

The second alternative assumes that the deficit-reduction package in the Greenbook is expanded to \$50 billion by raising income tax rates. M2 is assumed to stay on the baseline path. The model result is that real output is depressed slightly in the short run, but recovers fully by 1991 as the economy responds to initially lower interest rates and an associated lower exchange value of the dollar. You can see that there are substantial benefits in terms of deficit reduction -- which grow over time as the tax base expands.

One may wish to take these simulations with a grain or two of salt. As we always warn, the econometric results inevitably are influenced by the analytical priors of the modelers, and besides that, events could be shaped importantly by special expectational effects. One could, for example, envision that the more expansionary path in the "More Money" scenario would substantially alter perceptions of Fed policy

intentions and lead to greater inflation expectations and a much sharper dollar depreciation than is embodied in these results.

Similarly, quite different results might flow from the fiscal action if it radically lowered expectations of out-year federal deficits. If bond yields plunged, rather than falling gradually as the model's term-structure equation suggests, then the short-run output losses might be reduced or eliminated. On the other hand, if exchange market participants showed their approval of U.S. policy by bidding up the dollar, it might exacerbate the short-run contractionary effects of the deficit reduction. Such analytical uncertainties afflict any forecast, but I suspect that they are magnified when one hypothesizes changes in policy that are appreciable departures from recent patterns.
